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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/865,376 | 05/25/2001 | Robert Arthur Black | 10010261 | 3725 |

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09/25/2002

AGILENT TECHNOLOGIES
Legal Department, 51U-PD
Intellectual Property Administration
P.O. Box 58043
Santa Clara, CA 95052-8043

EXAMINER

LUU, THANH X

ART UNIT

PAPER NUMBER

2878

DATE MAILED: 09/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/865,376

Applicant(s)

BLACK, ROBERT ARTHUR

Examiner

Thanh X Luu

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2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. Figure 3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Claim 19 (as dependent from claim 18), claims the first group of regions made up of both depressions and protrusions. It appears that an embodiment in which the first group of regions is made up of both depressions and protrusions is not described in the specification. Figures 2 and 4 show depressions and protrusions, respectively, but not a combination of the depressions and protrusions.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-8 and 13-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Kato (U.S. Patent 4,647,771).

Regarding claims 1-8, Kato discloses (see Figures 5, 9 and 10) a surface scanned by an optical sensor of a relative position determinator, for use with a light source, comprising: first regions (7X) that reflect light beams from the light source (29) toward the optical sensor (30X), in the form of reflected light beams; and second regions (6; not labeled in Figure 5) that reflect the light from the light source away from the optical sensor, in the form of deflected light beams, the reflected light beams and the deflected light beams together form an image used by the position determinator to detect change in the position of the optical sensor relative to the surface (see column 4, lines 4-26). Kato further discloses (see Figure 5 and column 5, lines 37-47) the first and second regions are specular (reflective). Kato also discloses (see Figures 9 and 10) the first regions are surfaces containing surface protrusions (60) and are rotationally symmetric. In addition, Kato discloses (see Figure 5) the first regions are sized to be detectable by the optical sensor. Kato further discloses (see Figure 9) the second regions (6) surround the first regions (7X). Lastly, Kato also discloses (see column 5, lines 57-65) the surface covered with an optically transparent coating.

Regarding claims 13-17, Kato discloses (see Figures 5, 9 and 10) a method for determining the position of an optical sensor relative to a surface, wherein the optical sensor is part of a relative position determinator, to be used with a light source that illuminates the surface, comprising the steps of: shining light from the light source (29) onto the surface; reflecting light from a first group of regions (7X) on the surface toward the optical sensor (30X), in the form of reflected light beams; reflecting light from a second group of regions (6; not labeled in Figure 5) on the surface away from the

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optical sensor, in the form of deflected light beams; forming an image with the reflected and deflected light beams, the image used by the relative position determinator to detect change in the position of the optical sensor relative to the surface (see column 4, lines 4-26). Kato further discloses (see Figure 5 and column 5, lines 37-47) the first group and second group of regions are specular (reflective). Kato also discloses (see Figures 9 and 10) the first group of regions is made up of rotationally symmetric elements (60). Kato also discloses (see column 5, lines 57-65) the surface covered with an optically transparent coating.

5. Claims 9-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Zalenski (U.S. Patent 4,807,166).

Regarding claims 9-12, Zalenski discloses (see Figures 1 and 2) a surface (3) scanned by an optical sensor (9) of a relative position determinator (1), for use with a light source (7), comprising: (see Figure 3a) regions of first reflectance (33) that reflect light beams from the light source in the form of a first set of reflected light beams; and regions of a second reflectance (31), less reflective than the regions of the first reflectance, that reflect light beams from the light source in the form of a second set of reflected light beams, the first set of reflected light beams and the second set of reflected light beams together forming an image used by the relative position determinator to detect changes in the position of the optical sensor relative to the surface (see column 5, lines 1-16). Zalenski further discloses (see column 4, lines 36-45) the regions of the first reflectance are a first color, of high reflectance (white), and the regions of the second reflectance are a second color, of low reflectance (black),

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darker than the first color. Zalenski also discloses (see Figure 6) the regions of the first color are sized to be detectable by the optical sensor (A-D).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato.

Regarding claims 18 and 19, Kato discloses (see Figures 5, 9 and 10) the first group of regions is made up of surfaces containing protrusions. Kato does not specifically disclose the first group of regions made up of surfaces containing depressions. However, the type of surface to choose from, protrusion or depression, is a simply a matter of design choice. As long as the surface regions are specular, the device would function correctly regardless of the type of surface used. Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to choose depressions or a combination of depressions and protrusions for the surface of the first group of regions in the method of Kato as desired. That is, since the first group of regions is specular, the operation of the regions to reflect light remains the same regardless of the type of surface chosen.

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Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh X. Luu whose telephone number is (703) 305-0539. The examiner can normally be reached on Monday-Friday from 6:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta, can be reached on (703) 308-4852. The fax phone number for the organization where the application or proceeding is assigned is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

txl
September 19, 2002



Thanh X. Luu
Patent Examiner